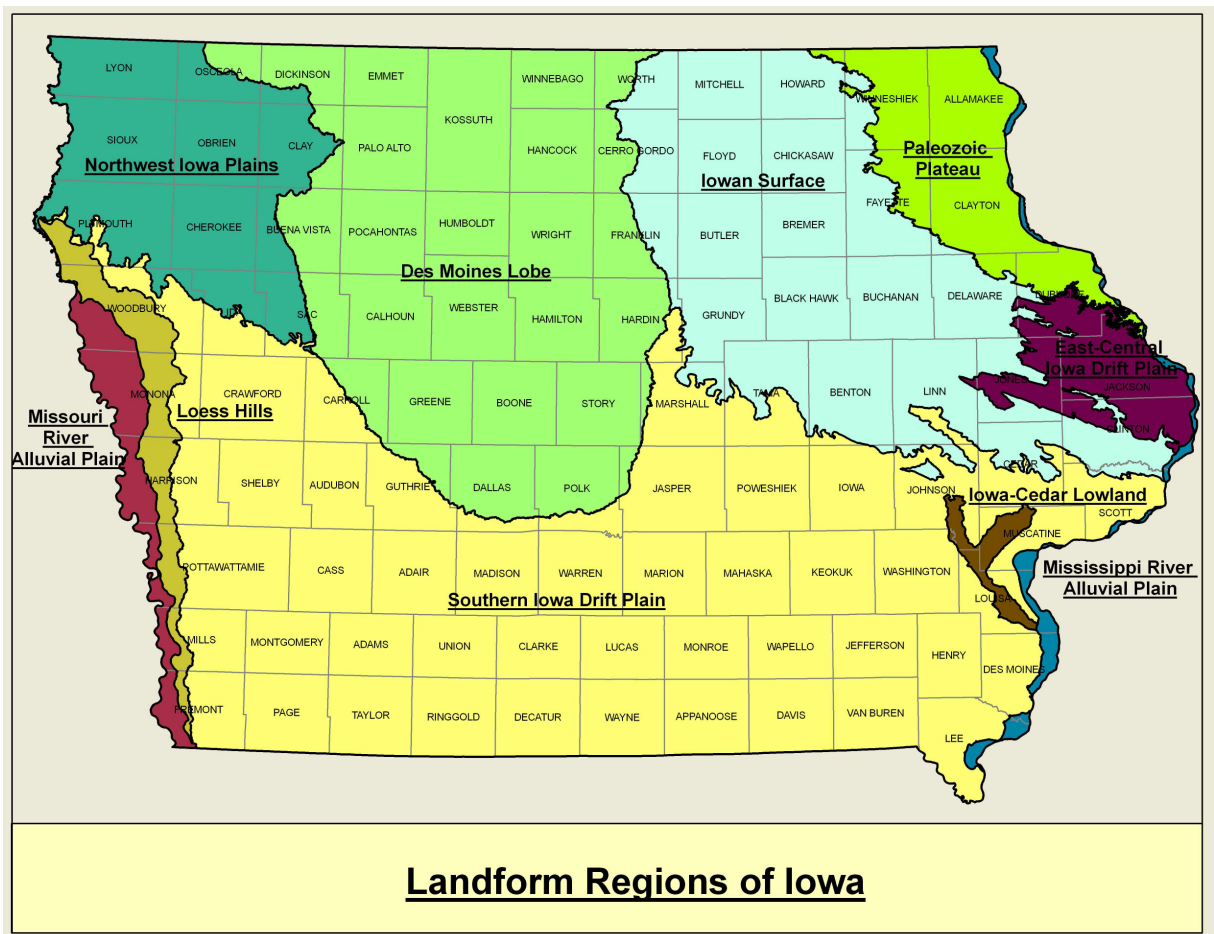
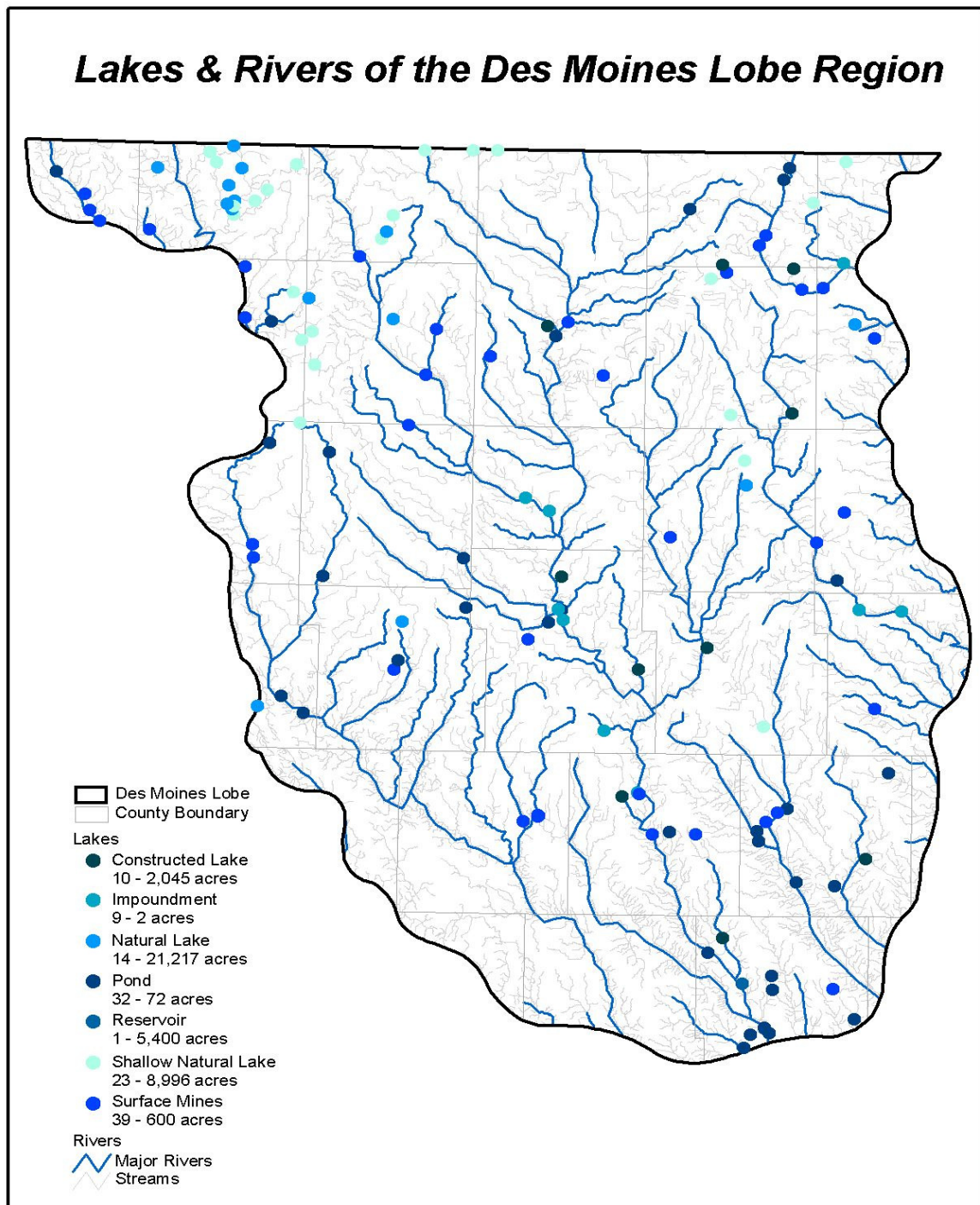


APPENDIX 18. Iowa Lakes and Rivers by Region

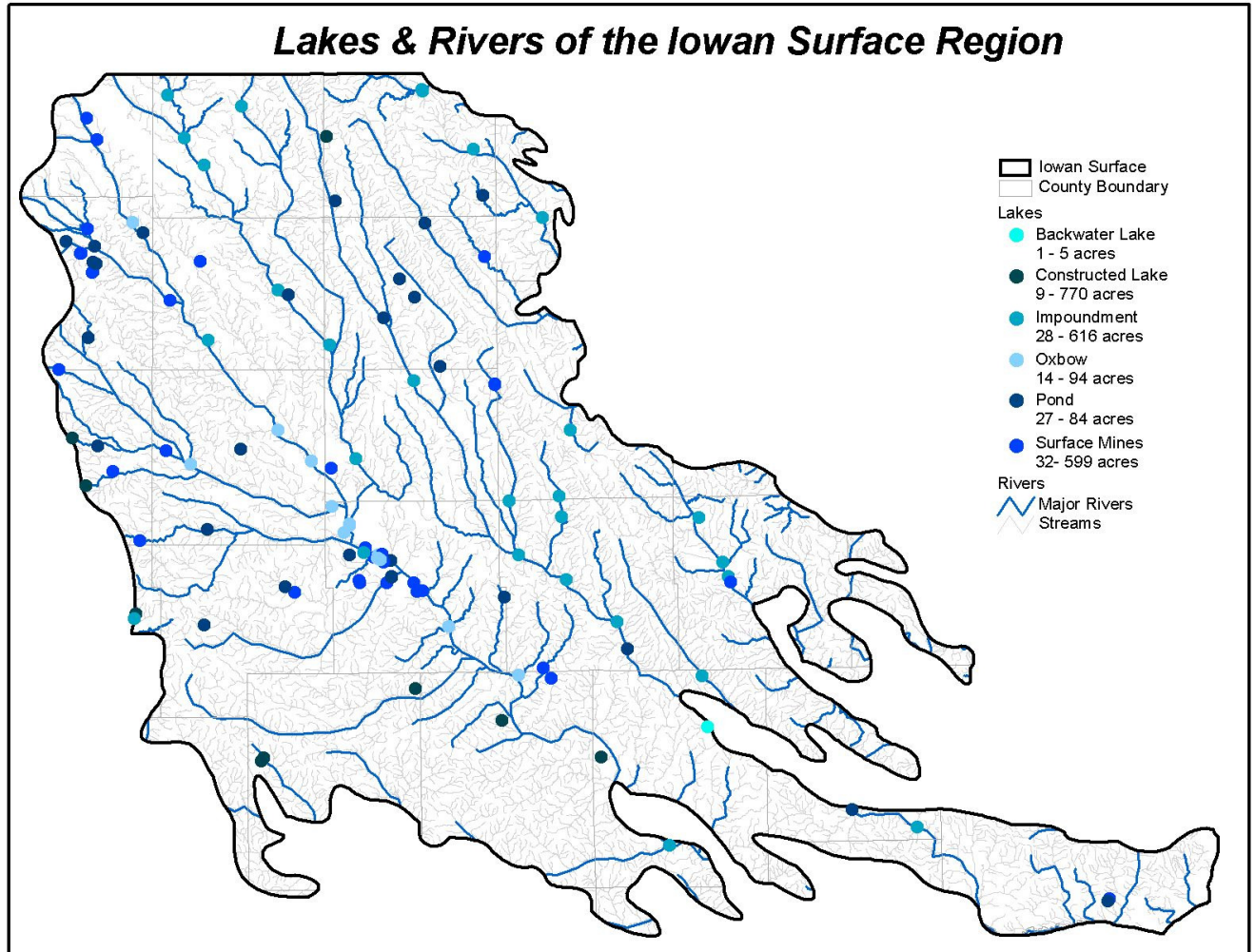
Region Locator Map



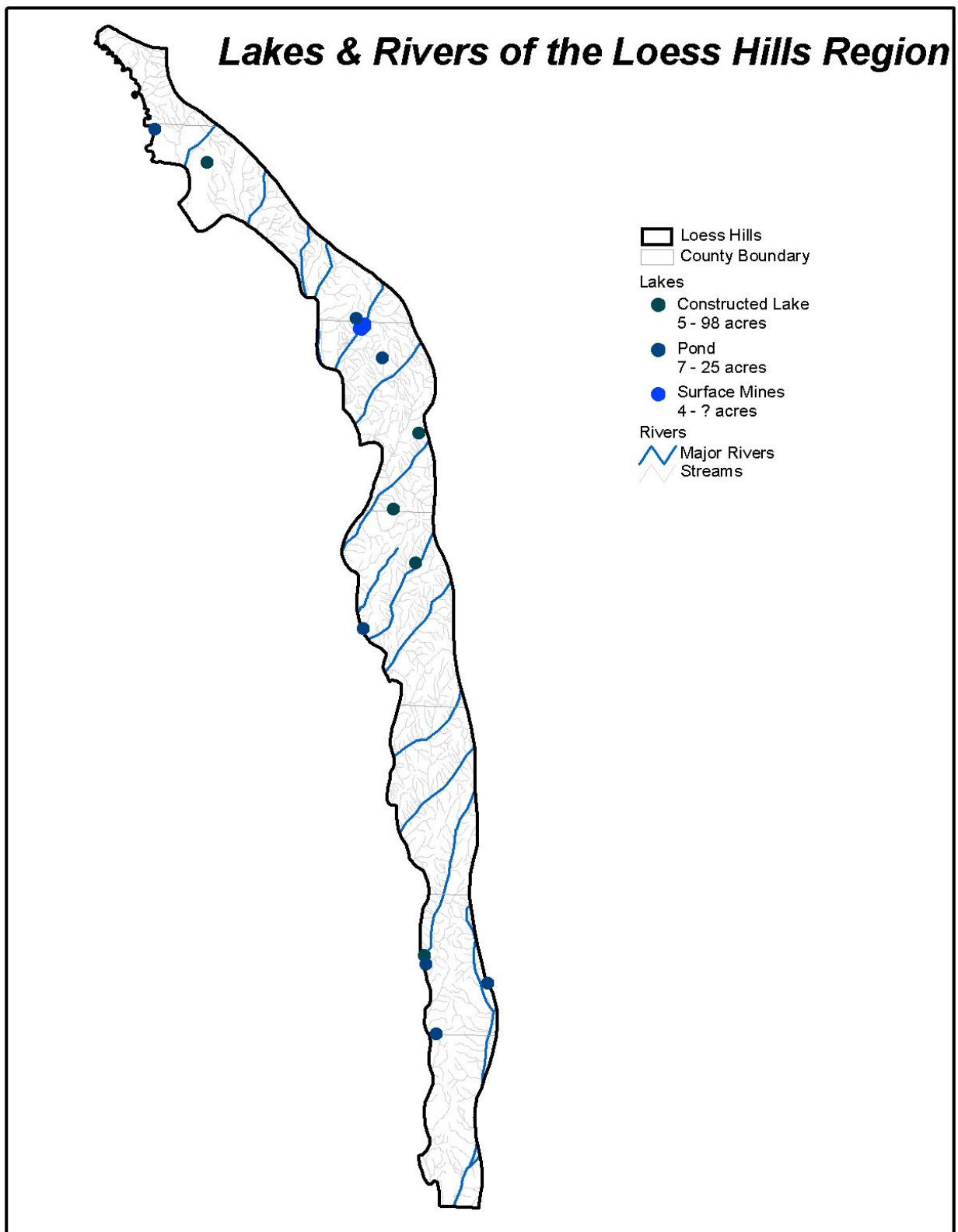
Map 18-1. Des Moines Lobe - Lakes and Rivers



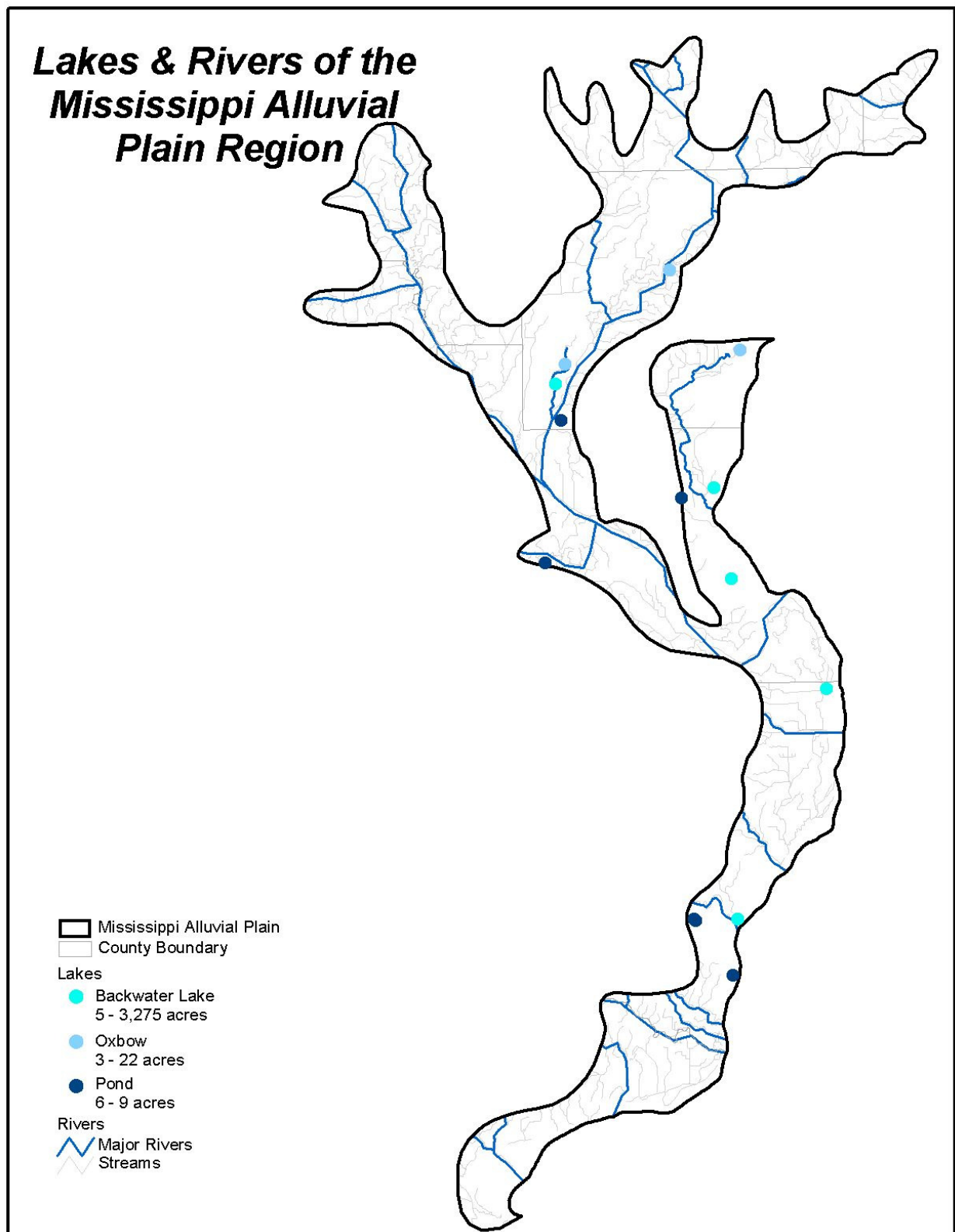
Map 18-2. Iowan Surface - Lakes and Rivers



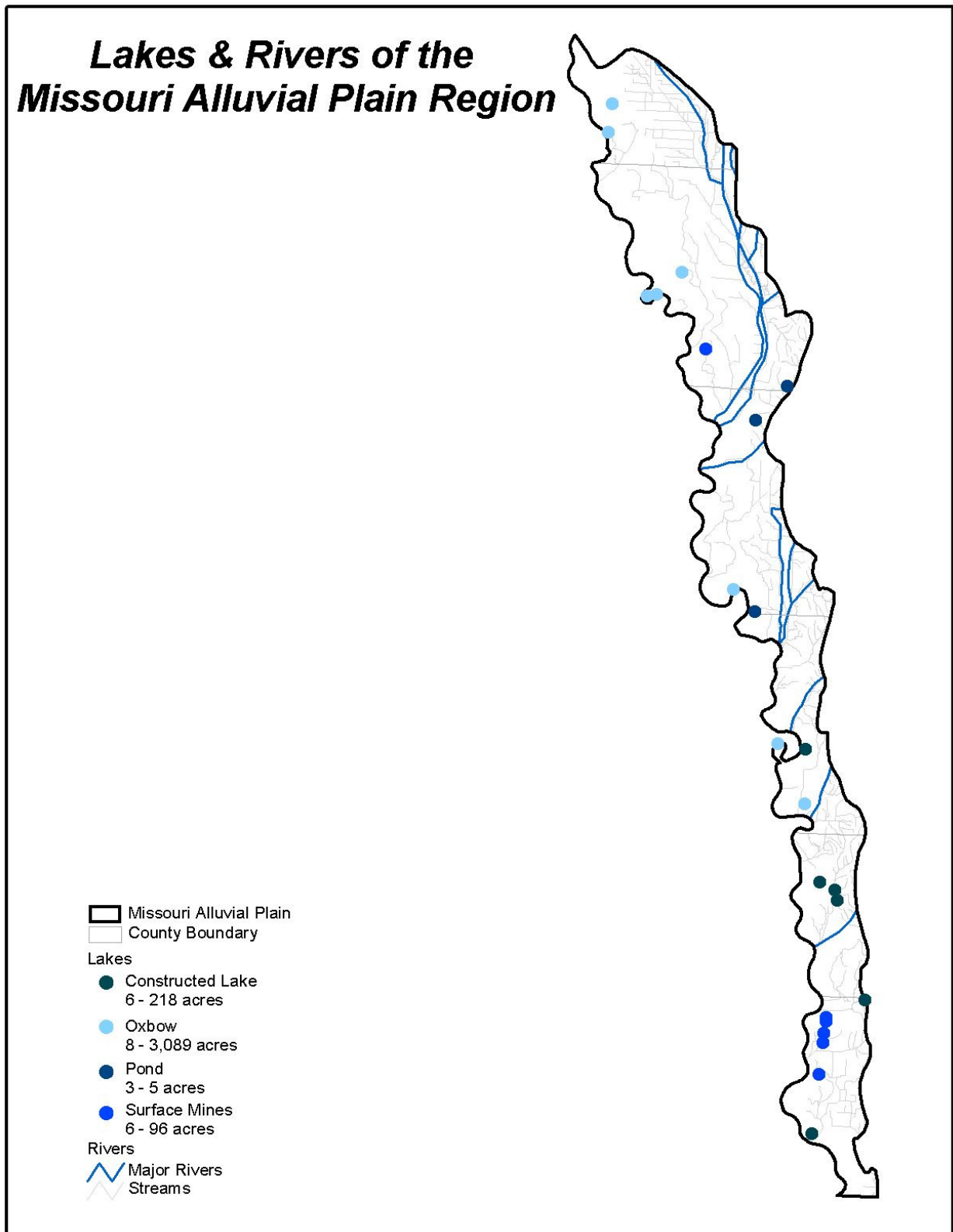
Map 18-3. Loess Hills - Lakes and Rivers



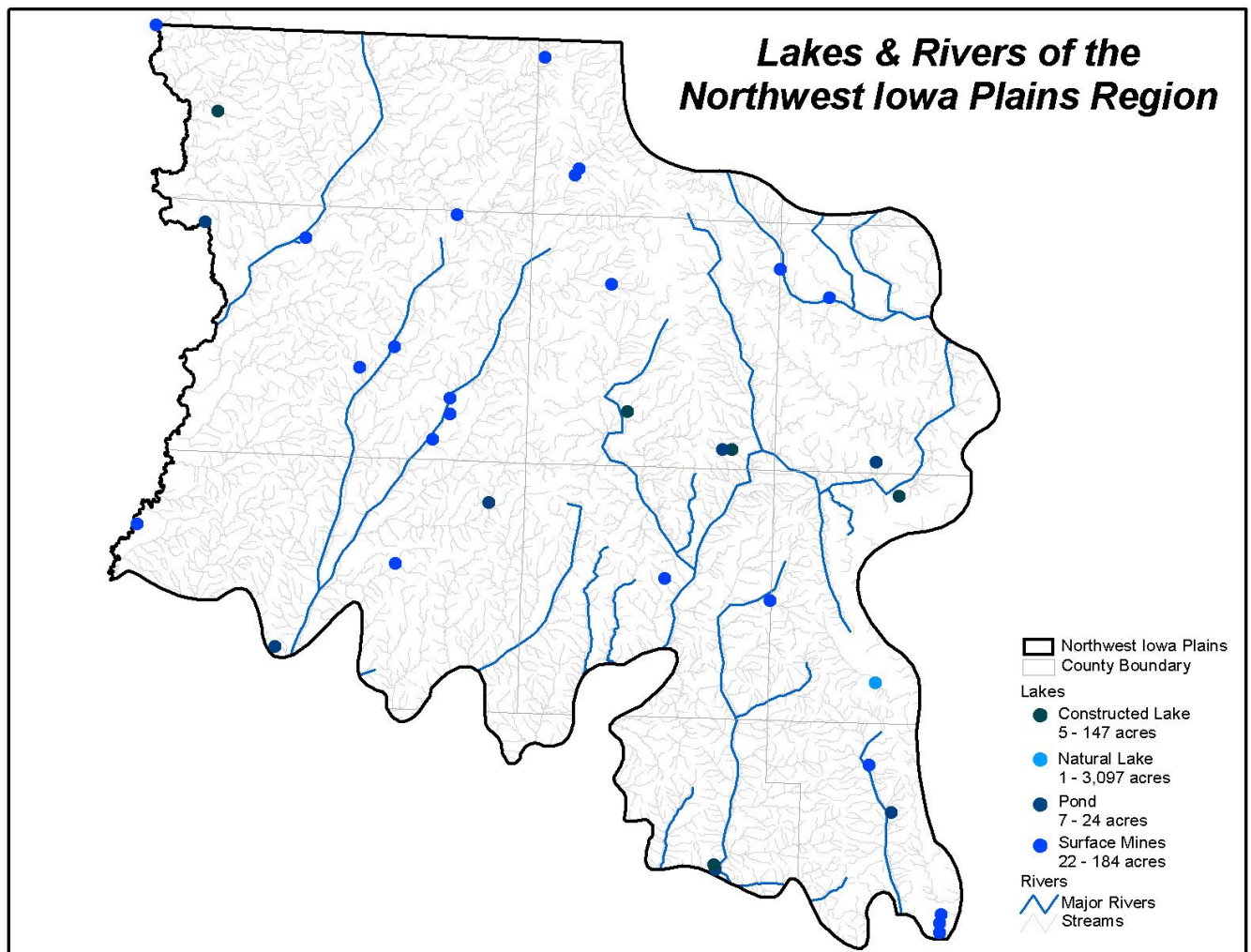
Map 18-4. Mississippi Alluvial Plain - Lakes and Rivers



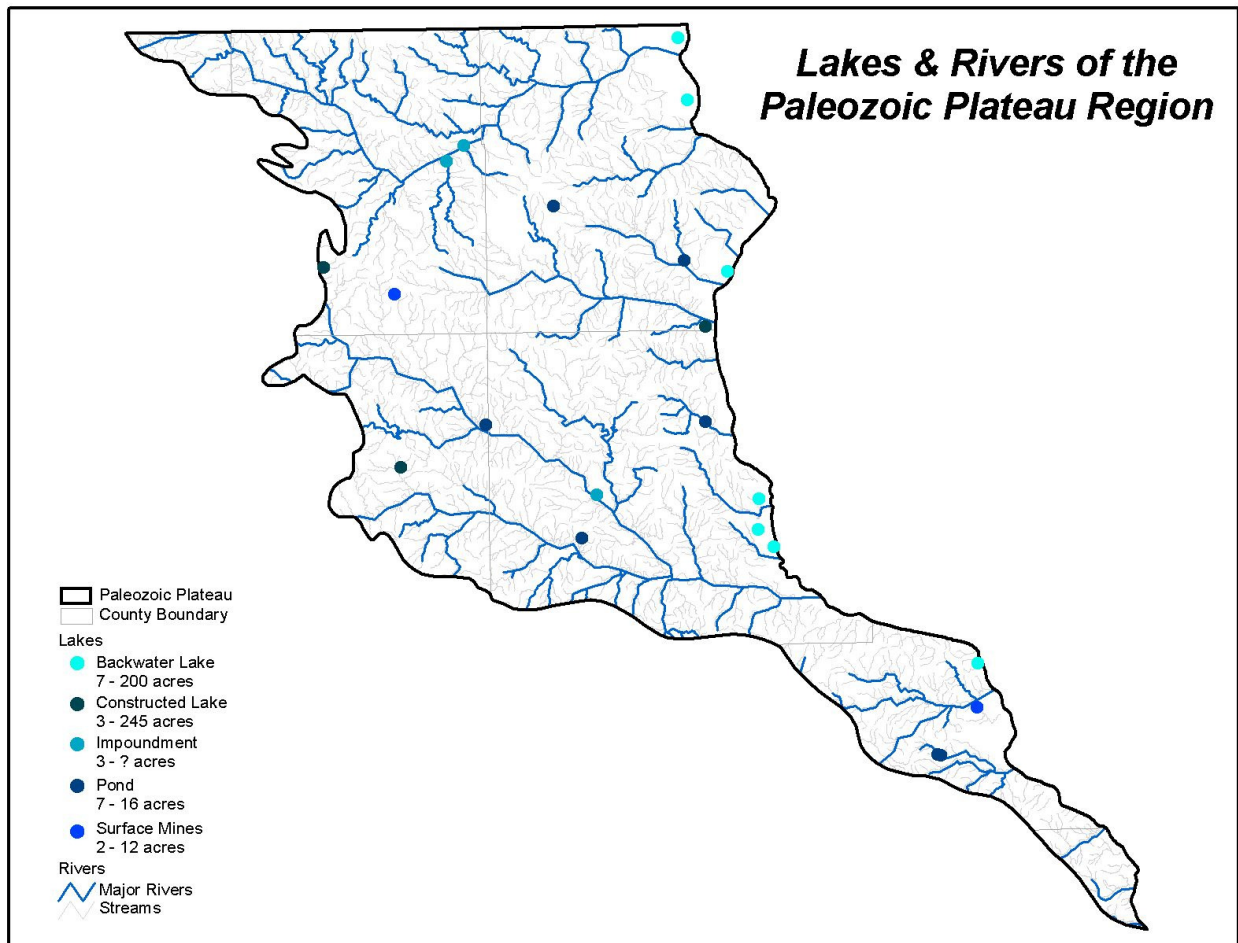
Map 18-5. Missouri Alluvial Plain - Lakes and Rivers



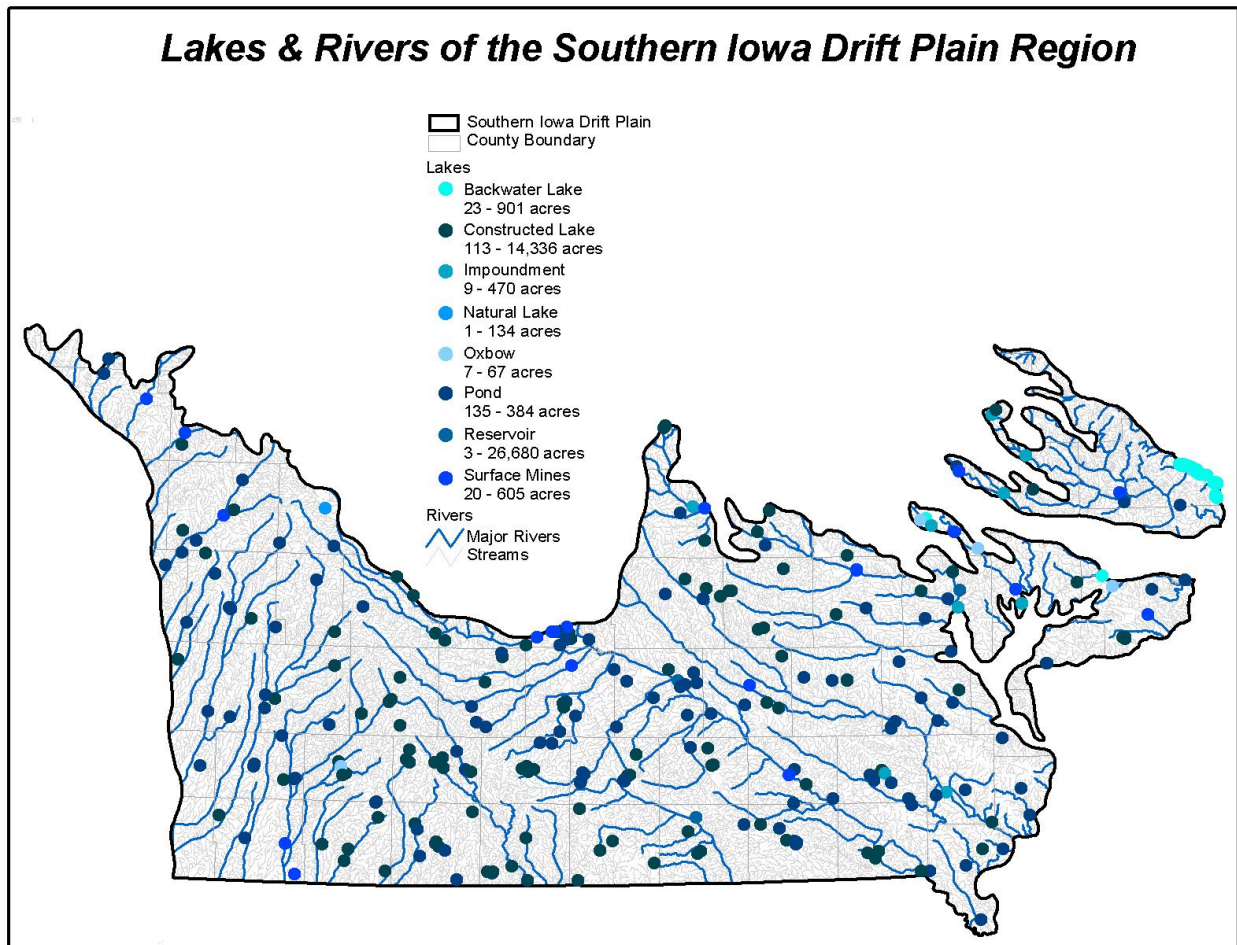
Map 18-6. Northwest Iowa Plains - Lakes and Rivers



Map 18-7. Prairie to Hardwood Transition - Lakes and Rivers

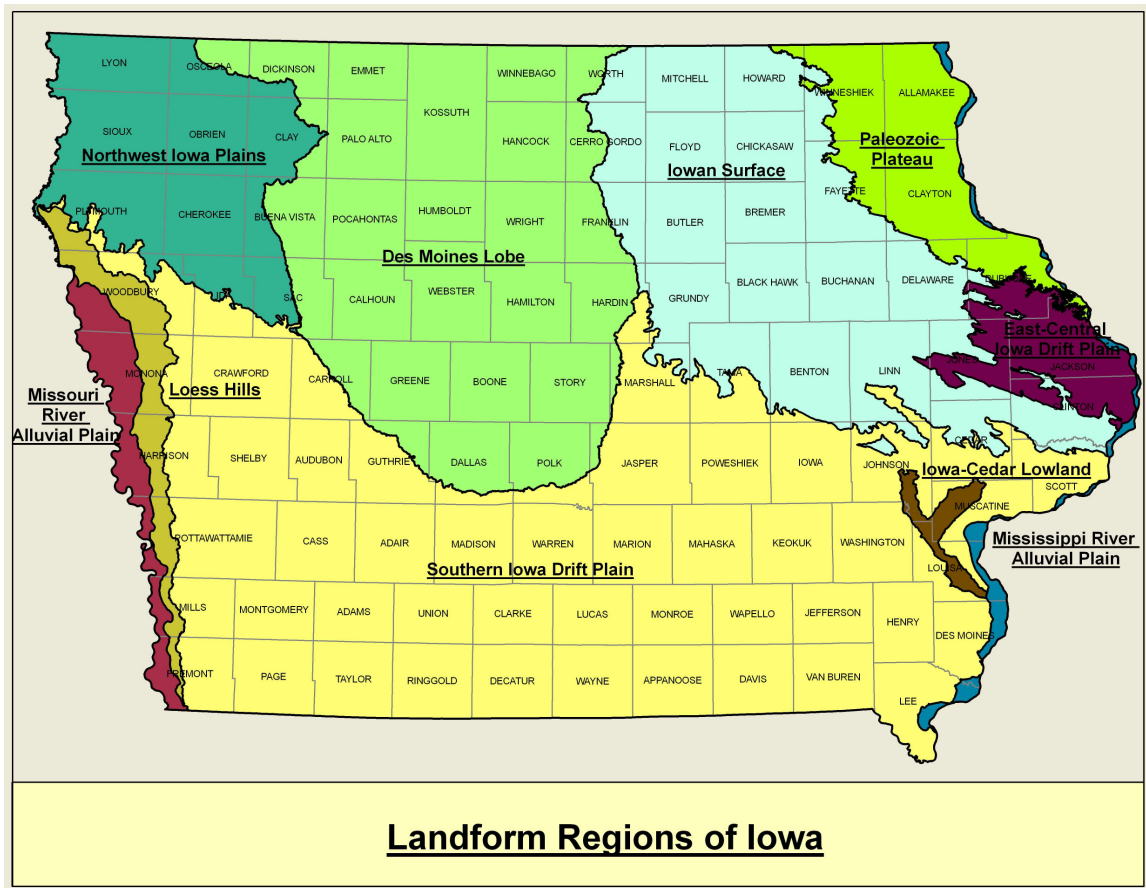


Map 18-8. Southern Iowa Drift Plain - Lakes and Rivers

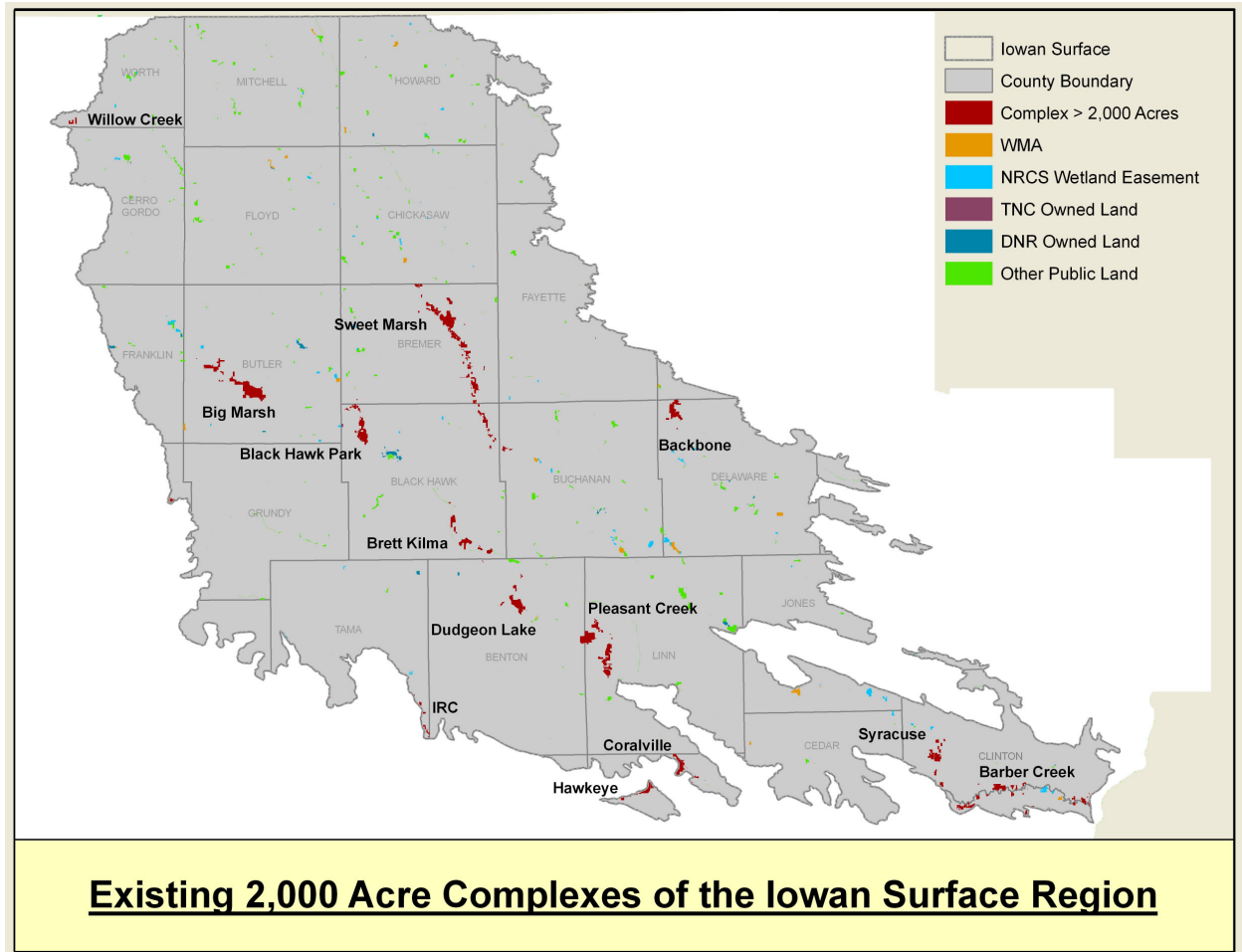


APPENDIX 19. Existing Large Habitat Complexes in Public Ownership by Region – Updated in 2010

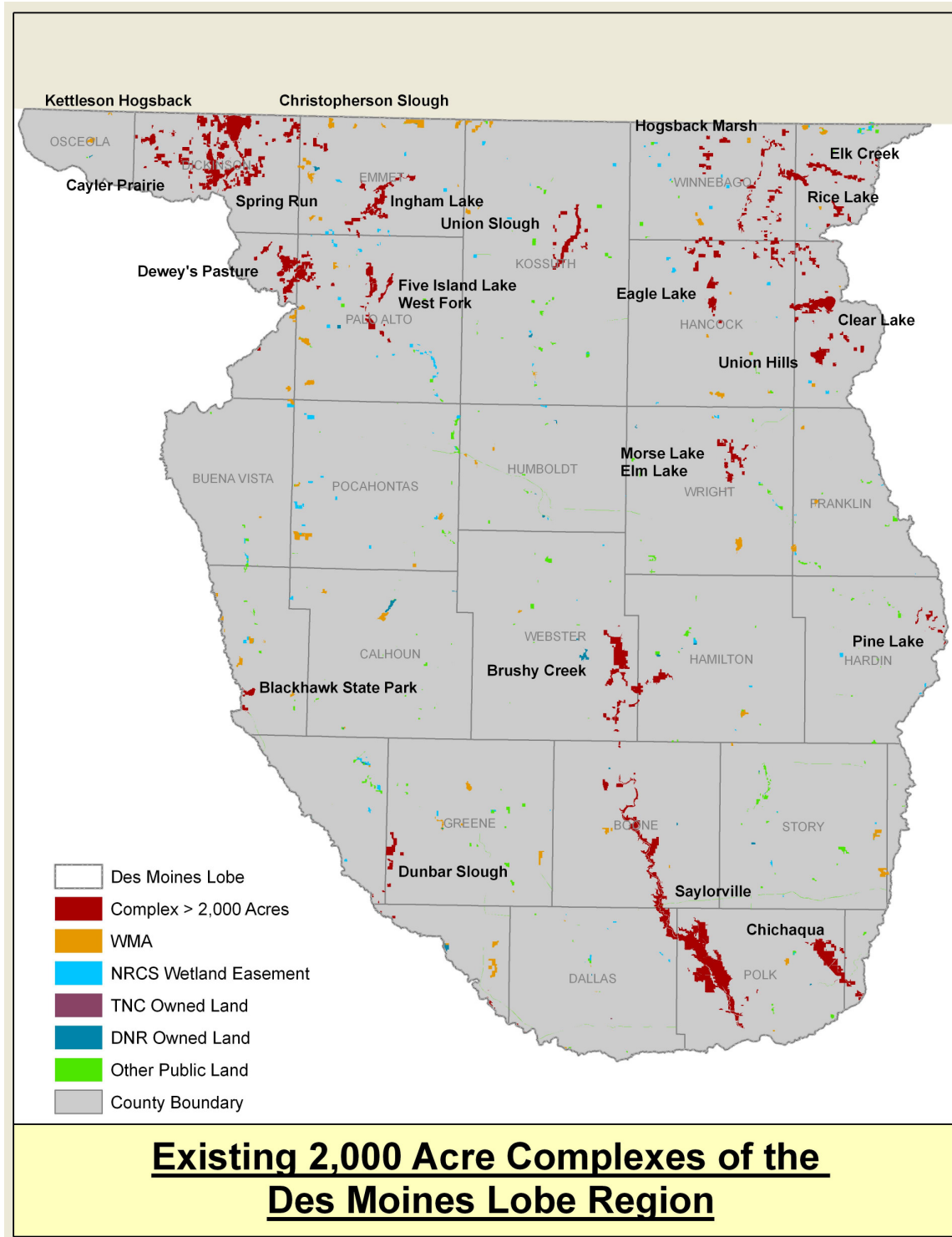
Region Locator Map



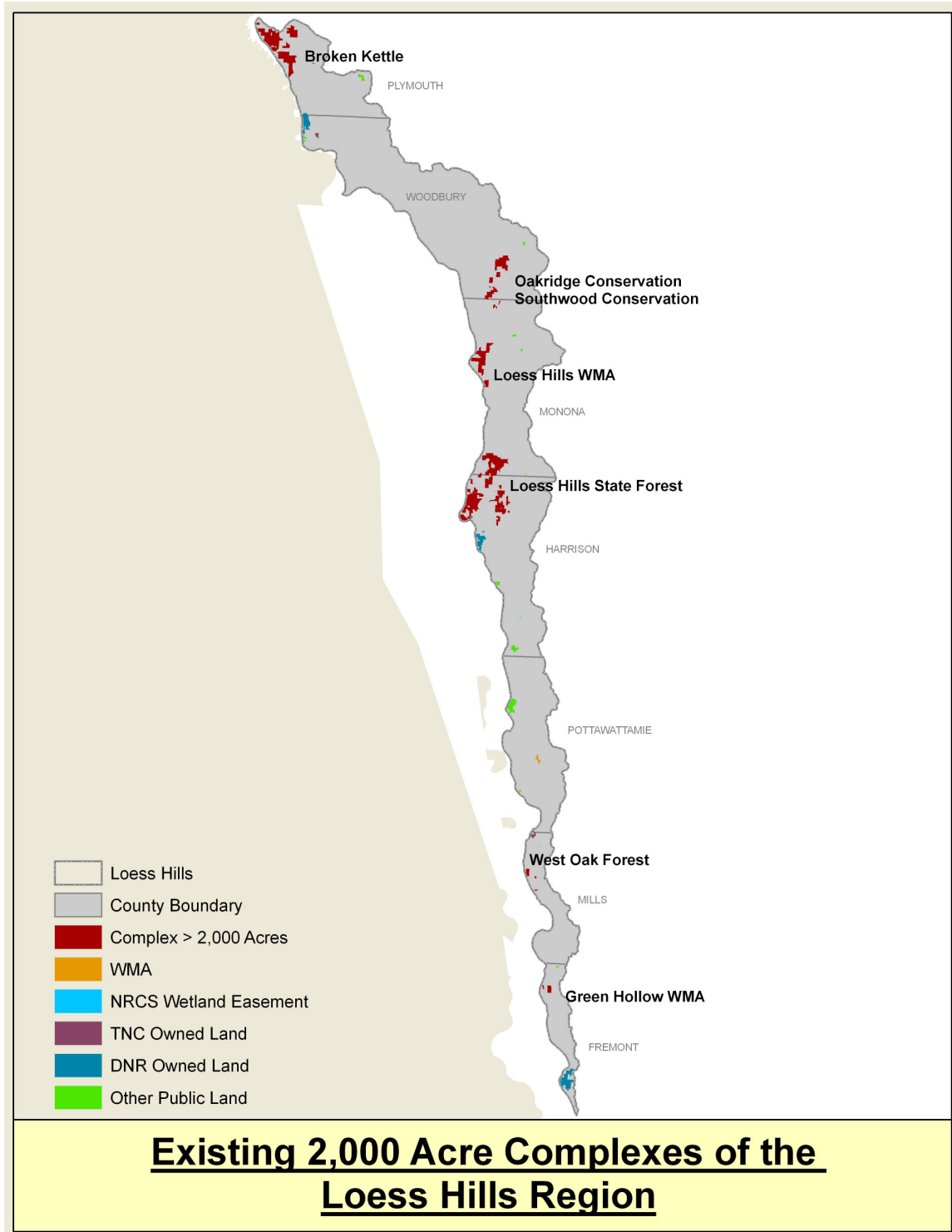
Map 19-1. Iowan Surface - Large Habitat Complexes



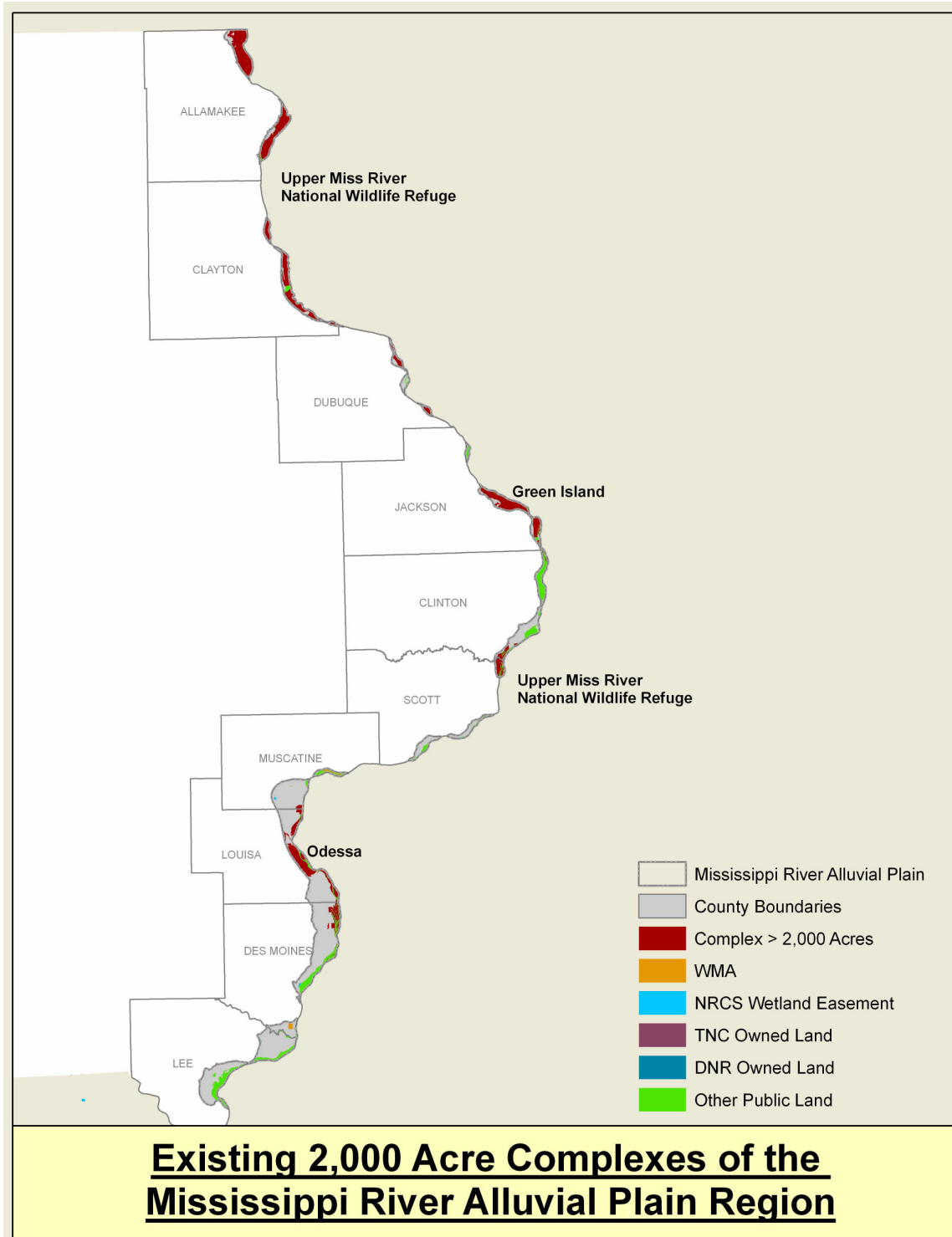
Map 19-2. Des Moines Lobe - Large Habitat Complexes



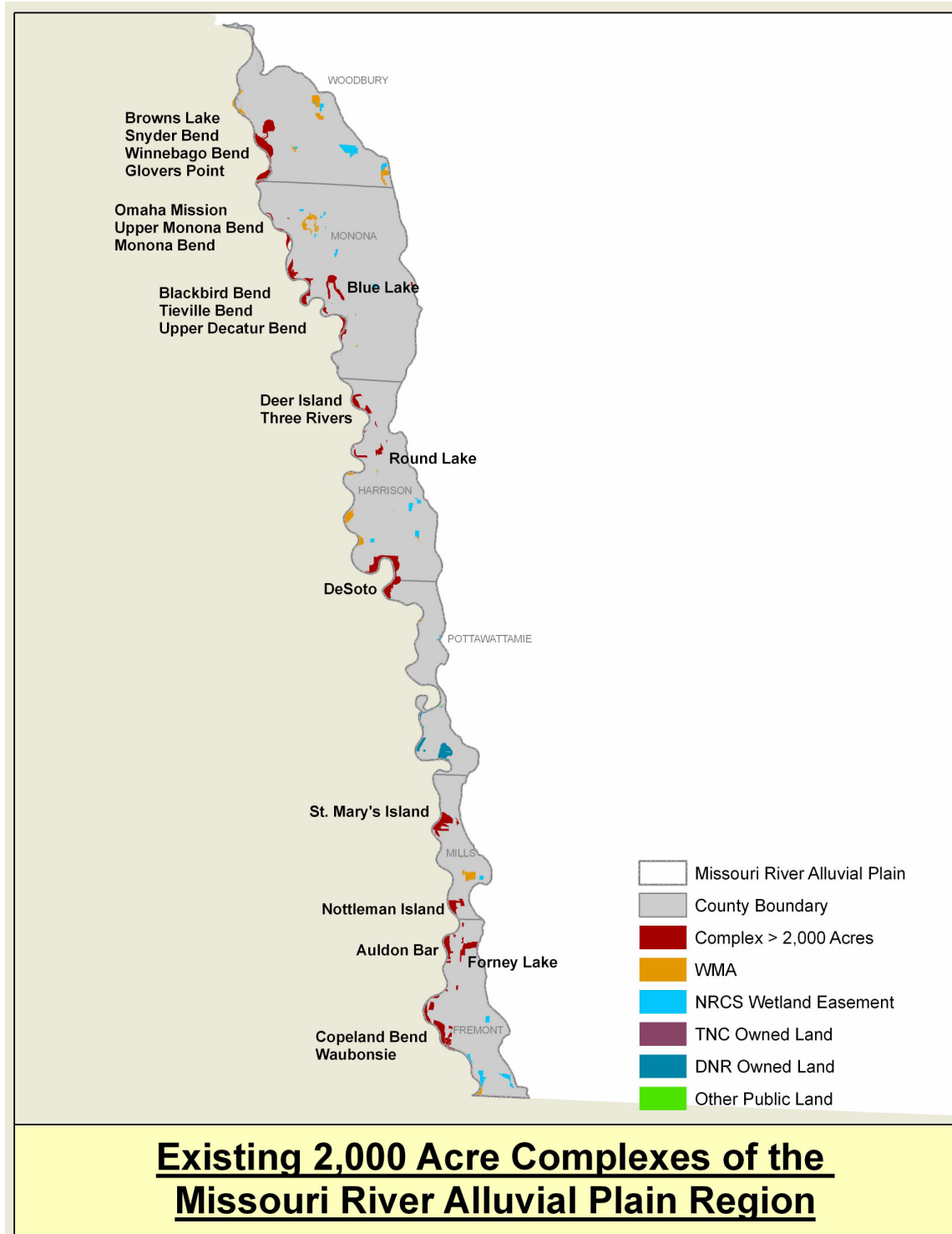
Map. 19-3. Loess Hills - Large Habitat Complexes



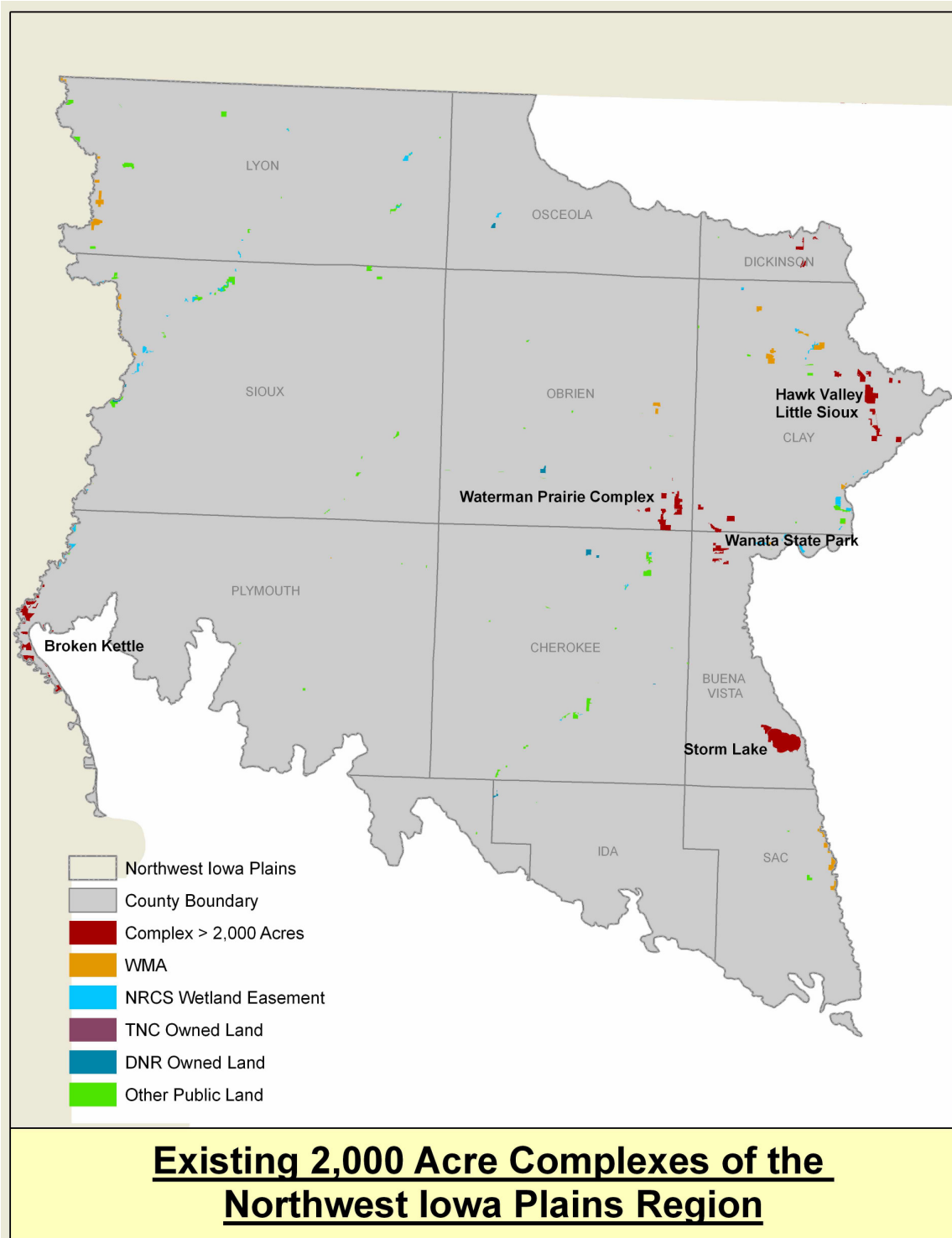
Map 19-4. Mississippi Alluvial Plain - Large Habitat Complexes



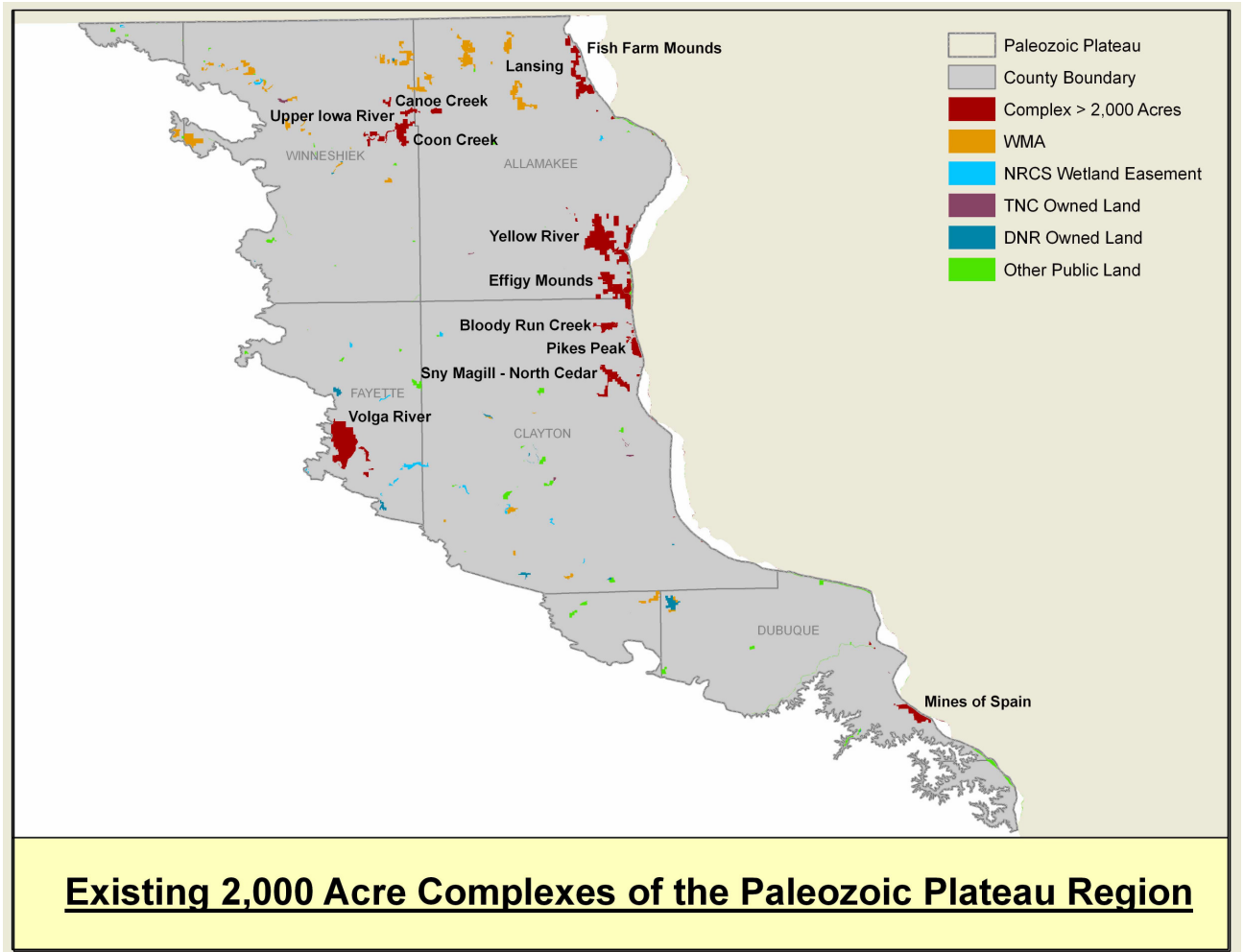
Map. 19-5. Missouri Alluvial Plain - Large Habitat Complexes



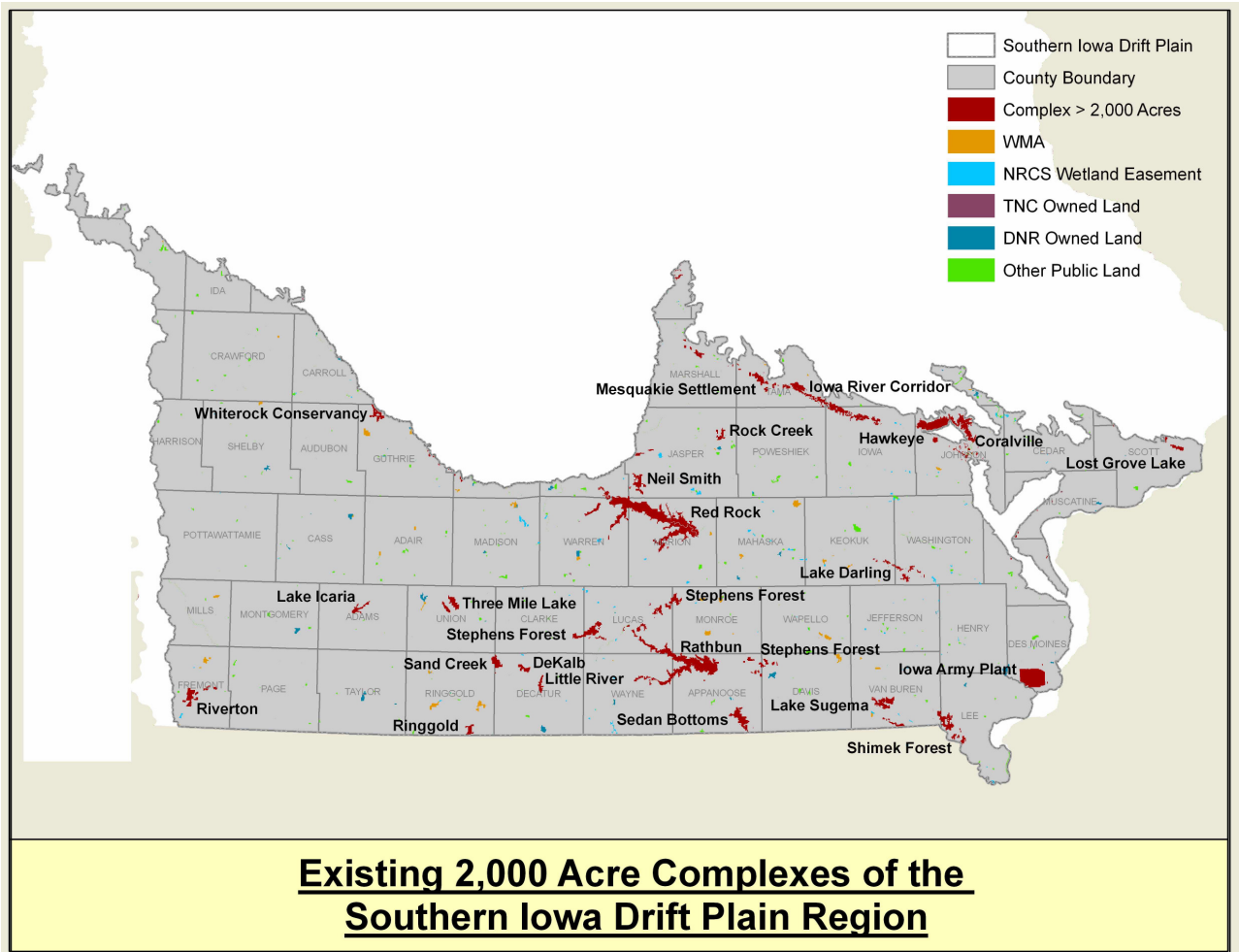
Map 19-6. Northwest Iowa Plains - Large Habitat Complexes



Map 19-7. Paleozoic Plateau Large Habitat Complexes



Map 19-8. Southern Iowa Drift Plain - Large Habitat Complexes



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<http://www.audubon.org/bird/iba> - Audubon Important Bird Areas
<http://www.biodiversitypartners.org> - Defenders of Wildlife home page, information on invasive species control grants, monitoring recommendations
<http://www.fws.gov> - U.S. Fish and Wildlife Service home page
<http://www.fws.gov/midwest/planning> - Plans for DeSoto, Driftless Area, Upper Mississippi, Union Slough, Mark Twain refuges
<http://www.iowaaudubon.org> - Iowa Audubon home page
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<http://www.iowaodes.com/> - Iowa Odonata Survey home page
<http://www.nabci-us.org> - National Bird Conservation initiative home page
<http://www.nature.nps.gov/nnl> - National Park Service National Natural Landmark Program page
<http://www.natureserve.org> - Nature Serve home page
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<http://www.odonatacentral.org> - Odonata Central website, also hosts Dragonfly Society of the America's Webpage
<http://www.partnersinflight.org> - Partners-in-Flight home page
http://www.ssarherps.org/pages/comm_names/Index.php - Society for the Study of Amphibians and Reptiles, Standard English and Scientific Names Committee
<http://shorebirdplan.fws.gov> - U.S. Fish and Wildlife Service shorebird plan
<http://www.waterbirdconservation.org> - Waterbird conservation plan

**STRATEGIC AND OPERATIONAL PLANS DEVELOPED BY WILDLIFE
CONSERVATION ORGANIZATIONS:**

North American Waterfowl Management Plan

Prairie Pothole Joint Venture (PPJV) Implementation Plan

Iowa PPJV Implementation Plan (IDNR)

Upper Mississippi River and Great Lakes Region (UMRJV)
Implementation Plan,

Iowa UMRJV Implementation Plan

The Nature Conservancy Ecoregional Plan:

Central Tallgrass Prairie

Northern Tallgrass Prairie

Prairie Forest Border

Partners in Flight Physiographic Area Plans:

Dissected Till Plains - Physiographic Region #32

Northern Tallgrass Prairie, Physiographic Region #40

Upper Great Lakes Plain, Physiographic Region #16

United States Waterbird Conservation Plan

United States Shorebird Conservation Plan

APPENDIX 21. Monitoring and Surveys Conducted on Iowa's Wildlife: 1960-2004

21-1. Terrestrial Wildlife - Long Term Monitoring

Population Monitoring	Lead Agency	Description	Years
Game Species			
Deer Populations	IDNR	Aerial counts, Spotlight routes, Roadkills.	1976 – Present
Turkey Brood Production	IDNR	IDNR and rural resident cooperators	1976 – Present
Duck Breeding Populations	IDNR, FWS	Aerial surveys, Ground transects	1955 – Present
Giant Canada Goose Populations	IDNR, FWS	Aerial surveys and ground transects.	1964 – Present
Waterfowl Migration	IDNR	Weekly counts during fall migration	1970– Present
Midwinter Waterfowl	IDNR, FWS	Counts of waterfowl populations	1955 -Present
Mourning Dove Call-Count	IDNR, FWS	Call-count routes in summer.	1966 - Present
August Roadside	IDNR	Permanent count routes for upland game	1962 - Present
Winter pheasant survey	IDNR	Sex ratio counts	1963 – 1990
Ruffed grouse drumming survey	IDNR	Drumming male counts	1962 – 1998
Nongame Species			
Breeding Bird Survey	IDNR, FWS	Breeding bird survey routes.	1966 – Present
Audubon Christmas Bird Count	Audubon	Volunteer searches	1906 – Present
Midwinter Bald Eagle Counts	USGS, IDNR, Audubon	Counts of wintering eagles	1991 – Present
Prairie Chicken Booming Grounds	IDNR	Lek locations and booming male counts	1995 – Present
Sandhill Crane Breeding Populations	Intl. Crane Foundation, IDNR	Counts of nesting pairs	1998 – Present
Sandhill Crane Nest Monitoring	IDNR	Production of young from known nests.	1992 – Present
Osprey Nest Monitoring	IDNR, CCB Partners	Nest location and fate for all known nests	1997 – Present
Barn Owl Nest Monitoring	IDNR	Nest location and fate for all known nests	1983 – Present
Kestrel Nest Box Monitoring	DNR, Volunteers	Maintain records for kestrel nest box trails	1983 – 1997
Trumpeter Swan Nest Monitoring	IDNR	Nest locations and fate of all known nests	1998 – present
Colonial Waterbirds	Naturemapping	Record all known rookeries	1993 – 1997
Peregrine Falcon Nest Monitoring	IDNR	Nest location and fate for all known nests	1992 – present
Bald Eagle Nest Monitoring	IDNR, FWS	Nest location and fate for all known nests	1977 – Present
Bobcat Status Monitoring	IDNR	Statewide distribution of bobcats	2001 - present
River Otter Monitoring	IDNR	Distribution from release sites	1985 – present
Iowa Naturemapping	ISU, Volunteers	Informal citizen-based reporting	1999 – Present

21-1. Terrestrial Wildlife - Long Term Monitoring (continued)

Game Harvest Monitoring	Lead Agency	Description	Years
Deer Harvest	IDNR	Based on hunter surveys.	1953 – Present
Turkey Spring Harvest	IDNR	Based on hunter surveys.	1953 – Present
Turkey Fall Harvest	IDNR	Based on hunter surveys.	1953 – Present
Furbearer Harvest	IDNR	Furharvester reports	1953 – Present.
Waterfowl Harvest	IDNR, FWS	Hunter surveys, waterfowl parts collections.	1953 – Present
Small Game Harvest	IDNR	Hunter Surveys	1962 – Present

21-2 Terrestrial Wildlife - Short Term Surveys and Inventories

Survey	Lead Agency/Person	Description	Years
Birds			
Iowa Breeding Bird Atlas	IDNR, volunteers	Statewide survey of Iowa's breeding birds	1985-1990
Raptor migration survey	Audubon, IDNR	Fall migration surveys at selected locations, intermittent at most sites	1982 - Present
Mammals			
Small mammal inventory	Bowles ¹	Seven southcentral counties)	Jun-Aug 1984
Small mammal inventory	Bowles	Statewide road kills	1980-1990
Small mammal inventory	Bowles	Rathbun WMA)	1978-1982
Small mammal inventory	Bowles	Pilot Knob State Park	1981-1982
Small mammal inventory	Bowles	Distribution of <i>Perognatus flavescens</i>	1984-1991
Small mammal inventory	Bowles	Ogren farm - Marion County	1974-1980
Small mammal inventory	Bowles	Marion County	1976-1985
Small mammal inventory	Bowles	Marion County	1979-1980
Small mammal inventory	Bowles	Ada Hayden Heritage Park, Story County	2002
Small mammal inventory	Bowles	Hardin, Mitchell, Worth Counties	1985-1986
Small mammal inventory	Bowles	Fremont &, Mills counties	1983
Small mammal inventory	Bowles	Harrison & Monona Counties - WMAs	1982
Small mammal inventory	Bowles	Scott, Muscatine, Louisa, & Guthrie counties	1988, 1992-1993
Small mammal inventory	Bowles	Woodbury & Plymouth counties	1981
Small mammal inventory	Bowles	Sioux & Lyon Counties	1980
Small mammal inventory	Bowles	Woodbury &, Guthrie counties	1980
Small mammal inventory	Bowles	Webster County (1981
Small mammal inventory	Bowles	Clayton County	1976, 1983
Small mammal inventory	Bowles	Cherokee County	1979-1980
Small mammal inventory	Bowles	Black Hawk County	1976-1983
Bat inventory	Bowles	Eastern half of Iowa (mist nets)	1977-1996
Small mammal inventory	McCullough	Wapsipinicon River, Clinton & Scott counties	2003
Bat Survey For Rabies	State Hygienic Lab, Coralville	Statewide	1979-1991
Reptiles & Amphibians			
Loess Hills Reptile And Amphibian Inventory	Christiansen ³	Searches for reptiles and amphibians	1983
Survey Of Gray Tree Frog Spp.	Christiansen and	Distribution of the gray treefrog complex	1996

	Clarida		
Survey	Lead Agency/Person	Description	Years
Cricket Frog Survey	Christiansen and VanGorp	Survey of cricket frogs in northern Iowa.	1996
Red-Bellied Watersnake Survey.	Christiansen	Distribution of red-bellied watersnakes in southeast Iowa.	2000
Blanding's Turtle Survey.	Christiansen – VanDeWalle	Blanding's turtle in northern Iowa	1998 – 1999
Big Sand Mound Illinois Mud Turtle And Ornate Box Turtles	Christiansen	Mark and recapture study at Big Sand Mound Preserve in Louisa County.	1970 – present
Reptile And Amphibian Distribution Inventories	Christiansen	Statewide distribution and status of reptiles and amphibians	1970 – present
Copperbelly Watersnake Survey .	Christiansen	Distribution of Copperbelly watersnakes in Muscatine and Louisa counties.	1998
Massasauga Rattlesnake Survey.	VanDeWalle – Christiansen	Massasauga populations in eight Iowa counties	2000 – 2002
Lower Cedar River Reptiles and Amphibians Inventory	VanDeWalle - Christiansen	Inventory of existing species and review of historical records	2004 - 2005

¹ Dr. John Bowles, Central College, Pella

² Dr. Thomas Rosberg, Drake University, Des Moines

³ Dr. James L. Christiansen, Drake University, Des Moines

21-3. Aquatic Species – Long Term Monitoring

Survey	Lead Agency	Description	Years
Statewide Lake Monitoring	IDNR	fish populations on selected lakes	1950's – present
French Creek Trout Population Monitoring	IDNR	Population characteristics of brown and brook trout	1980– present
Mississippi River Monitoring	IDNR, FWS	Fish populations, water quality, aquatic vegetation, and macroinvertebrates in Pool 13 of the Mississippi River.	1989 – present
Middle Missouri River Ecosystem Monitoring	IDNR	Fish and invertebrates in the middle reach of the Missouri River.	1996 – present
Higgin's Eye Pearlymussel Monitoring	FWS, IDNR	Higgin's eye populations in 10 habitat areas the Mississippi River.	2000 – present
Rathbun Lake Tributary Stream Monitoring	IDNR	Water quality, fish communities and habitat suitability of Rathbun Lake tributaries	1994 – present
Zebra Mussel Monitoring	FWS	Abundance and distribution in the Upper Mississippi River	2001 – present

21-4 Aquatic Species – Short Term Surveys and Inventories

Survey	Lead Agency	Description	Years
Topeka Shiner Survey	IDNR	Distribution and abundance	1997-2000
Southwest Iowa Stream Survey	IDNR	Presence, abundance, and habitat of fish in SW Iowa streams	2002– present
Flathead Chub Survey	IDNR	Distribution and abundance in the West Nishnabotna watershed	2005 - 2007
Topeka Shiners And Flathead Chub Survey	IDNR	Presence of Topeka shiners and flathead chubs in 9 SW Iowa streams	2005-2007
Warmwater Stream Survey – Ne Iowa	IDNR	Fish populations at 10 sites in Upper Iowa & Turkey Rivers	1999– present
Fish Survey – SW Iowa	IDNR	Fish and habitat in 15 southwest Iowa streams	1997-2000

Survey	Lead Agency	Description	Years
Analysis Of Stream Habitat In Iowa	IDNR	Statewide stream habitat and fish communities	1995 – 2001
Coldwater Stream Survey	IDNR	Game fish in coldwater streams in northeast Iowa.	1999– present
South Pine Creek Brook Trout Survey	IDNR	Population surveys to evaluate changes in the brook trout population.	1994, 1999, 2002
Iowa Rivers Information System	IDNR	Statewide information system for all Iowa interior rivers.	Completed
Flathead Catfish In The Mississippi River	IDNR	Determine age and growth data, develop young-of-the-year indices, and document movement.	1999 - present
Centrarchid Overwintering Site Survey	IDNR	Sample in Mississippi River Pools 9 – 11 for centrarchid overwintering sites	2000 – 2003
Lower Des Moines River Survey	IDNR	Fish surveys at standard sites in the Lower Des Moines River.	2002 – present
Iowa Lakes Survey	IDNR	Water quality and fish populations of 132 recreational lakes	2000 – 2005
Statewide Mussel Survey	IDNR	Sampled mussel populations in major Iowa streams	1984 – 1985
Statewide Mussel Inventory	IDNR	Sampled inland streams for mussel presence, abundance, and habitat	1998 – 1999
Freshwater Mussel Inventory Of The Des Moines River	IDNR	Des Moines River between Red Rock Dam and Eddyville.	2003
Mussel Inventory Of The Missouri River	FWS	Mussels of the Missouri National Recreational River below Gavins Point Dam	1999
Impacts Of Constructed Weirs - SW Iowa	IDNR	Fish population dynamics and movement in relation to 2 weir designs.	2001 - present